

Record

50
learned by date 12/22



Home Notes

from June 18 1908
to

Property of Allen Graham Bell

1331 Connecticut Avenue }
Washington D.C. } winter address

Beinn Bhreagh, near Baddeck, }
Nova Scotia, Canada } Summer address



1908 June 18 — Thursday — at Hammond, Ind. 1

The new Aerodrome A.E.A. No 3 Curtiss' "June-bug"
is now ready for trial. Experiments will
probably be made tomorrow.

Notes from "Aeronautics" — June 1908 p. 35

The great steps of Aviation in Europe.

- 1906 Oct 23. — 25 m & Santos Dumont at Bagatelle
1907 Oct 26. 770 m & Henry Farman at Issy
1908 Jan. 13. 1000 m. & Farman at Issy (upon ^{Scotch Whiskies} ~~Whiskies~~ ^{Prize})
1908 Mar. 21 2004 m. & Farman at Issy
1908 Apr. 11. 3925 m & Delagrange at Issy
1908 May 27. In air 9 min. & 30 sec. Record duration & Delagrange at Rome.

Records of flights of machines of A.E.A.

- 1908 Mar. 12. 318 ft 11 ins. & Baldwin in Redwing over
1908 Mar. 17 — Redwing on Lake Keuka ^{Lake Keuka, N.Y.} destroyed
1908 May 18. 279 ft (93 yds) & Baldwin in two White Wing
1908 May 19. 100 ft. & Selfridge in White Wing ^{at race track, Hammond, Ind.}
" " " 240 ft. & Selfridge in White Wing.
1908 May 22. 1017 ft. & Curtiss in White wing.
(615 ft - touched & rose wing 402 ft - total 1017 ft)
1908 May 23. 600 ft & McCurdy — machine crashed

Steps.

- | | | |
|-------------|-----------------------|------------------------|
| 1908 Mar 12 | Baldwin in Redwing | 318 ft 11 inches |
| 1908 May 22 | Curtiss in White wing | 615 ft - without touch |

2 1908 June 18 — Thursday at Hammond
 What the Wright Bros. have accomplished.
 Am. Mus., Aeronautics, July 1907 Vol 1 No 1 p. 23

1905 Sept 26. 17,961 meters (11 $\frac{1}{8}$ miles)
 1905 Sept 29. 19,570 m. (12 miles)
 1905 Sept 30. — (17 min. 15 sec. in air.)
 1905 Oct 3. 24,535 m. (15 $\frac{1}{4}$ miles)
 1905 Oct 4. 33,456 m. (20 $\frac{3}{4}$ miles)
 1905 Oct 5. 38,956 m. (24 $\frac{1}{5}$ miles)

A.E.A. From No 3 Curtiss' June-bug —

Weight	
Middle section	124 lbs
Wings	106 "
Tail	23 $\frac{1}{2}$
Front control	11
Machine	264 $\frac{1}{2}$
Engine &c. —	207
G. H. Curtiss	140
Total weight	611 $\frac{1}{2}$ lbs.

Surface
 of main wing piece
 estimated by Selfridge
 as 370 sq. ft.

Flying-weight.

Weight (say) 612 lbs
 Surface 370 sq. ft.
 Ratio 1.65 lbs per sq ft.

Flying weight of

From No 1	Selfridge Redwing	1.23 lbs per sq ft
From No 2	Baldwins White-wing	1.56 lbs per sq ft
From No 3	Curtiss' June-bug	1.65 lbs per sq ft

according to W. M. S.

1908 June 18 — Thursday — at Hammond ³
rough draft for Assoc. Meet tomorrow.

The A.E.A. has just completed its third Aerodrome
"The June-bug" upon plans approved by W. G. H. Curtis.
which was given a trial this afternoon.

This drone is built upon substantially the same
models as the Redwing & White-wing differing
chiefly in the greater strength of the three-wheeled car
that supports the drone when running on the
ground. ~~There are also differences~~ and in the
~~method~~ mode of working the various controls.
The surface of the front control has been increased
to 20 square feet ~~and it has been placed~~
and its distance from the main aeroplanes has
been increased to — ft.


The whole machine, including the engine
and man weighs 612 lbs, and the ~~amount~~
main supporting surfaces of the wings are estimated
at 370 square feet.

Weight including engine and man, 612 lbs —
Supporting surfaces of wings 370 sq. ft. — making
the flying weight 1.65 lbs per sq. ft.

The front control, or horizontal rudder for vertical
steering up or down has a surface of 20 sq. feet
and is placed 9(?) ft in front of the

The Aerodrome White-wing was so much
injured by the accident of May 23(?) that

Drone No 1 was Selfridge's Red-wing
Drone No 2 was Baldwin's White-wing
Drone No 3 is Curtis' June-bug




4.

1908 June 19 — Friday — at Hammondspeth.

Body of "June-Bug" made ^{today} a speed on race track estimated at 45 miles per hour — Curtiss thinks it would easily exceed 50 miles per hour on straight track.

Whole machine assembled this evening and started down the track with intention of trying a flight — but tail broke before lifting speed had been obtained. Further experiments postponed. Plans sent following dispatch to Associated Press: —

Hammondspeth June 19. Preliminary tests of running gear and surfaces were made today with Aerodrome No 3 Curtiss' "June-bug" which extended so late into the evening that there was no time left to make a flight. (signed) Graham Bell

Have suggested to Curtiss that the new tail should be bowed like the main wing-piece  so as to be stronger in the middle than at the ends.

June 19 — ¹²Friday — at Hammondsport.

Bright boats run from
Montreal to Sydney, C.B., every
week. Two different lines

- (1). Black Diamond line,
- (2) Henry Doherty & Co.

These large boats have a
comfortable cabin + good
meals. These boats don't
run regularly and it would
be a good scheme to telegraph
+ find out the exact date
they leave Montreal.

Boat. from Toronto to
Montreal leaves every day
about 2 o'clock P.M.

Buffalo hotels —
Best: — Iroquois
Second. Lafayette.
Third Stables.

Mrs Melville Bells. friends
in Montreal.

Mr & Mrs John Ware.
Montreal West.

Mrs Bells niece.

1208 June 20 — Sat — at Hammondport

345-593

345-592

345-594

345-595

} by Central to Buffalo N.Y.

Associated Press Buffalo

X Hammondport N.Y. June 20. An unsuccessful attempt was made this evening to raise the "Alvord" June-bug "into the air."

Agent Graham Bell

The drone ran on race track well enough but failed to rise when front control was raised.

Inclined to think that the new Haincock used for covering the wings is too porous. Can blow right through it easily.

Mr. Cuthers will put on a coating of paraffine dissolved in gasoline. This should fill up the pores and make fabric air-tight.

It also has some "Silicate of Soda" or "liquid" glass — which dries off rapidly and leaves fabric air-tight & fire-proof — but stuff treated in this way is very heavy.


He also has some fire-proofing material used by Baldwin the balloonist — but doubtful whether this will make fabric air-tight.

Selfridge thinks head resistance has been increased by omission of covered beak. Mr. Cuthers thinks propeller, which has large slice off one side, does not shove properly. Another propeller is being made.

1908 June 20 — Sat — at Hammondspoint 7

Points worthy of note - comparing,
Plane No 3 with Plane No 2.

No 3 is heavier, has greater head-resistance,
wing-surfaces more porous, & propeller broader
on one side.

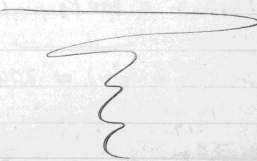
Greater weight & less efficient supporting surface.
Most important defect to my mind is
the porosity of the material covering the
wings. The new tail is of
the concavo-convex form .

The experiment was made this evening
at 7.55 p.m. — when it was getting dark.
about 100 spectators.

Further experiments tomorrow.

Plans: Hubert & I & Miss Cadell leave for
Buffalo tomorrow evening. Will stay
at Grosvenor Hotel — Leave ~~at Buffalo~~ ^{for Buffalo}
Monday afternoon 4.55 p.m. reaching
Brantford. Outains about 8 p.m.

Remain Tuesday in Brantford. Leave
Brantford Wed. for Toronto, & then
to Montreal, Quebec, & Sydney N.S.



Consider present cells 40 to the square metre horizontal
output - at 21 gms per cell including bleeding,

$$\frac{2140}{840} \text{ Machine } 840 \text{ gms per m}^2 \text{ horizontal}$$

At 32 cells per m² horizontal

$$\begin{array}{r} 840 \\ 672 \\ \hline 21612 \\ 756 \end{array}$$

$$\frac{32}{32} \text{ Machine } 672 \text{ gms per m}^2 \text{ horizontal,}$$

At 40 cells per m² horizontal - 4000 cells
yield 100 m² horiz.

$$\text{At } 10.75 \text{ sq ft per sq m. } 370 \text{ sq ft} = 34.42^2$$

$$10.75: 1 :: 370:$$

$$\begin{array}{r} 1075 \overline{) 37000} (34.4 \\ \underline{32250} \\ 4750 \\ \underline{4300} \\ 4500 \\ \underline{4300} \\ 200 \end{array} \quad \begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 454 \quad 1 \checkmark \\ 908 \quad 2 \checkmark \\ 1362 \quad 3 \checkmark \\ 1816 \quad 4 \checkmark \\ 2270 \quad 5 \checkmark \\ 2724 \quad 6 \checkmark \\ 3178 \quad 7 \checkmark \\ 3632 \quad 8 + \checkmark \\ 4086 \quad 9 + \checkmark \\ \hline 40860 \quad 10 + \checkmark \end{array}$$



$$1 \text{ lb per sq ft} = 10.75 \text{ lbs per sq m horiz.}$$

$$10 \text{ lbs per m}^2 \text{ horiz} = 4540 \text{ gms per m}^2 \\ \text{or } 454000 \text{ gms per } 100 \text{ m}^2$$

$$1000 \text{ gms per m}^2 = 100000 \text{ gms per } 100 \text{ m}^2$$

$$\text{In other words } 1 \text{ Kg per m}^2 = 100 \text{ Kg per } 100 \text{ m}^2$$

$$450 \text{ lbs (man + engine)} = 204300 \text{ Kg.}$$

$$\begin{array}{r} 400 = 181600 \\ 50 = 22700 \\ \hline 204300 \end{array} \quad \begin{array}{r} \text{Machine } 84000 \\ \text{w/pt + engine } 204300 \\ \hline 288300 \end{array}$$

Flight weight with apt + motor onboard 2883 gms per m²

a little over 1/2 lb per sq ft

If 30 miles per hour will support 2 lbs per sq ft - Then 15 miles per hour should support $\frac{1}{2}$ lb per sq ft.

The ring Kite weighed only 240 gms per m^2 horiz. (?) or was it 420 gms.?

Lightest flying structure yet made.
Why not build it one metre high.

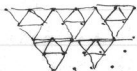


This would be an aluminum frame OK.

$$\begin{array}{r} 16 \\ \times 21 \\ \hline 32 \\ 33600 \end{array}$$

40 m^2 horizontal at 40 cells per $m^2 = 1600$ cells

1600 cells with ordinary leading at 21 gms = 33.600 kg.



10 1908 June 21 — Sunday — at Hammondsport.

Hammondsport, N. Y.

June 21, '08.

Chas. S. Thompson,
Associated Press,
New York, N. Y.

+ The Aerial Experiment Association's Aerodrome No 3, Curtiss' "June-Bug", made three successful flights here this afternoon with Mr. G. H. Curtiss as aviator.

The first flight was 456 ft. at the rate of 28.1 miles per hour.

The second was 407 ft. at the rate of 31½ miles per hour.

The third was 1266 ft. at the rate of 34½ miles per hour.

This last flight is the longest yet made in public in America and is only Mr. Curtiss' fourth attempt.

Graham Bell.



1908 June 25 — Wed — at Toronto 11

Dr. and Mrs. Bell and Miss Cadel arrived at Brantford from Buffalo about 8 p.m. ^{Monday the 22 June} and went immediately to the home of Mrs. George Bellachy. The next afternoon with the "Bell Memorial Association" of Brantford they drove to the old Bell Home and returned by way of Mrs. Frank Cuckshull's where afternoon tea was served. Wednesday June 24 about one the trio started for Toronto arriving about 3.30. Dr. Bell had an interview with a reporter from the "Toronto Mail" that same evening at the "King Edward" where the party is stopping.

June the 25 1908 The following telegram was received from Mr. J. C. D. McCurdy
Hammondsport N.Y. June 25, 1908

Mr. G. Graham Bell,
King Edward Hotel,
Toronto.

Sunehug made record flight early this morning 725 yds at an elevation of 40 ft. Time 41 seconds. Wind 8 to 10 miles an hour blowing. with machine tips worked beautifully and machine under perfect lateral control front rudder inefficient hence descent. Surfaces have been revarnished and colored yellow stretching them tight and absolutely air proof. Nothing materially injured. will

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1908

June 26 Friday en route Prescott to Montreal
try again this evening

S. G. D. McCurdy

Prescott 26 June 1908

Hammondsport N. Y. June 25 1908.
To Alexander Graham Bell

Prescott out.

Care of Mr. Toronto on Kingston of
R. C. Steamboat Line which left
Toronto today at two p. m. for
Montreal and if too late to catch
boat repeat to Windsor Hotel
Montreal Que.

" Curtiss flew eleven hundred
and forty yards three thousand
four hundred and twenty
feet in sixty seconds this
evening about 7.30 We have
telegraphed and telephoned
Secretary Aero Club of
America that we are now
ready to try for the Scientific
American Cup Hurrah "

Selfridge

The above telegram was
handed A. G. B as he

1908 June 26 - Friday - en route Prescott to Montreal 13

landed from the Str Toronto to take the train to Coteau a proceeding rendered necessary by the recent bursting of the bank of the South canal which prevents the passing up of the steamer. At Coteau we take to the river and the rapids at Lachine

1908 June 27 Sat. Montreal Hotel Windsor
Met on steamer Miss Jones a deaf mute teacher of Flint Mich. who is travelling alone; - two sisters, the Misses Arbaugh oral teachers, graduates of the Northampton Normal Class, one now teaching in Indianapolis; a U. S. Immigration agent in charge of a young anarchist who had ^{tried to} elude the immigration agents and get into the country across the border. ~~He~~ He had most pathetic brown eyes widely separated and certainly did not look bad. ~~We~~ Reached Montreal at 5.50 p.m. Housed by M. G. B.

1908

June 28 - Sunday — Windsor Hotel ^{Montreal}
 Following are three telegrams sent Friday
 at Coleau.

June 26 1908

Mrs. David Fairchild

"In the Woods"

Glorious news Hammond sport Curtis flew over
 kilometre and will now try for trophy. Both
 of you go our expense to witness trial.

M. G. Bell ~~F.H.C.~~

Peples
 "you angels
 will go like a
 shot" said Fairchild

June 26 1908

Lieut Selgridge

Hammond sport N.Y. U.S.G.

Eleven hundred and forty congratulations
 Thanks for reaching us. Hurrah!

Mabel G. Bell. ~~F.H.C.~~

June 26 1908

Lieut. Thomas E. Selgridge

Great! Would like Fairchilds to
 witness capture of trophy. Please notify them
 also Mr. Lyon.

(signed) Graham Bell ~~F.H.C.~~

The following Telegram was sent this morning.

June 28 1908

Mr. J. Q. D. McCurdy

Hammondsport N. Y. U. S. A.

Leave Montreal Monday afternoon Steamship Campagna Quebec S. S. Co.

Touching Quebec Tuesday, Gaspé Wednesday, Grand River Thursday landing at Charlottetown Friday. Telegraph news of capture of the trophy.

Graham Bell.

1908 July 3rd Friday Off Summerside P. E. I.
Arrived here ^{Charlottetown} early this A. M. on the
Campagna Quebec Navigation Co. Glorious
trip bright sunshine fresh exhilarating
air. On Wed evening it was particularly
clear and I could read the small hands
& figured on Alice watch at 8.45 by daylight.
A. G. B. & Miss Cadell took a walk on
Gaspé Bay at 2 A. M. and I was quite
light there. Saw Percé Rock at 8 A. M.
Thursday. Magnificent thing. Fishermen
boats duck shaped with red sails

Noted by M. G. B.

1908 July 3

Friday — at Charlottetown
P.E.I.

Arrived here today & SS Campana — staying at Victoria Hotel. Mr. Whitelam took a drive with us this evening. Mr. & Mrs. Howard with their dear little baby were passengers on Campana. They have gone to some beach on the northern shore of Prince Edwards Island.

Curtiss is to try for the Scientific American Trophy tomorrow — and we are all excited over prospect of success.

Do not like the way the aviator is pinned into a very small space — difficult to get in — difficult to get out — and very easily hurt in case of accident.

Like the wheelbarrow arm-chair arrangement with foot & trapeze bar in front to cling to. The spade advanced, & cut off can be on this bar — also sleeves to work over the controls. Side controls best worked by side movements of body, — thrusts apt to become unresponsive. Think also front control could be worked almost automatically by movement of body forward or back — here shifting of body backward should steer front control up — leaning forwards push it down — shifting by center of grav. would thus assist steering action.

1908 July 3 — Friday — at Charlotte 17
N.E.I.

Telegraph Philip Mauro to send some one
to Hammondport to see what patentable
features there may be about "jump bag" &c.

Front control had _____
(Eight went out aft)

1908 July 5 — Sunday — at Charlotte
N.E.I.
(Following titheans received.)

Hammondport July 2 1908. All arrangements
made with Aero Club for Trophy Trials
on July fourth at Hammondport.
(Signed) J.A.D. McCurdy

Hammondport, July 3 1908 Flew three
quarters of mile tonight everything O.K.
for July fourth.
(Signed) J.A.D. McCurdy

Hammondport, July 4 1908. Captured Trophy
today, by flying distance of one mile in
one minute and forty two seconds flew
full distance of valley came down on
account of trees making beautiful
landing machine under perfect control
and everybody happy
(Signed) J.A.D. McCurdy

1908 July 5 — Sunday, — at ^{Charlottesville P. S. I.} Hammondport
(Telegram continues)

Hammondport July 4 1908. Glorious victory Curtiss flew the Kilometre in one minute forty seconds and five hundred yards beside everyone missed you and mother others well Telegraph more later.
(signed) Daisy.

(Telegram sent)

Charlottesville July 6. To Aerial Experiment Association Hammondport W. V. Hurrah for Curtiss, Hurrah for June Bug Hurrah for A. E. A. and Trophy — leave Tomorrow Monday for Baddeck.
Capt. Graham Bell.

Telegram to ~~Camus~~ Mauro Cameron & Lewis Solidiers & Patients Washington D. C.
~~Hammondport~~ Charlottesville, July 5 1908. Please send some one to Hammondport W. V. at once at my expense to examine the aerodrome of the Aerial Experiment Association which has just won the Scientific American Trophy for heavier than air machines. We want to know what patentable features there may be about the

1908 July 5 — Sunday — at Charlottetown 19
P.E.I.

machine. See W. Curtis and report ~~it~~
~~me~~ by mail to me at Baddeck,
Nova Scotia. Take Lackawana or
Erie train to Bath local from there
to Hammondspoint.

(signed) Graham Bell

Telegram to J. H. Curtis Hammondspoint
Charlottetown July 5 1908. I have telegraphed
Mauro, Cameron and Lewis of Washington
to send patent expert to Hammondspoint
to examine machine and report to me
what patentable features there may
be about machine. Ask members of
Association to give him every assistance.
Accept our heartiest congratulations
upon your magnificent success.

(signed) Graham Bell

Telegram to J. A. D. Wallace, Hammondspoint.
Charlottetown July 5 1908. Thanks for
telegram. I recommend postponing
further experiments until machine has
been examined by patent expert.
Important to keep machine un-injured
until then. Fast off for Baddeck.

(signed) Graham Bell

20 1908 July 5 — Sunday, — at Charlottetown P.E.I.

Proposed telegram to be sent tomorrow,
to the Aerial Experiment Association
Hammondsport N.Y.

Pictou, N.S.

~~Charlottetown~~ July 6 1908 — If McCurdy wishes to follow on line of June-bug I recommend that McCurdy's machine be now built at Hammondsport and head-quarters be retained there for the present. In meantime don't run any risk of injuring June-bug until an application for a patent has been prepared. Would like Baldwin to help me in Baddicks soon as possible and when we are ready for motor would like all to come to Baddicks. ~~Telegraph reply to Baddicks.~~ If these plans are

~~(signed) Graham Bell~~
acceptable would simply let it be known that at my request further trials of June bug will be postponed until ~~we have~~ ~~a~~ another aerodrome ^{has been} completed so that in ~~event~~ ^{case} of accident to one ^{machine and there will be available for experiments with} ~~we can produce experiments with~~ the other. Would say nothing about patents outside as this would ^{put} ~~put~~ up other inventors to forestall us in the patent office. ~~Telegraph reply to Baddicks.~~
(signed) Graham Bell

1908 July 7 ——— Tuesday ——— at Benning, W. Va.

The foregoing telegram was sent from
Pictou, N. S., yesterday morning, Monday,
July 6, 1908.

Telegram received from Lieut. Selfridge
to-day as follows:—

~~Hammond~~
Hammondport, N. Y., July 7, 1908 — Meeting
held on receipt of telegram. Decided
to follow your suggestion, which was
in accordance with McCurdy's decision.
Casey and wife start north in a day
or so. (Signed) T. Selfridge

